<center>**The Fault Lines of Framing**</center>

Introduction

In this paper, I draw a series of overlooked conceptual distinctions to arrive at new conclusions concerning the rationality of 'framed' subjects. I argue that paying attention to the pragmatic contents conveyed by speakers' linguistic choices shows epistemic responsibility often to lie with the *speaker*, and not always with the *hearer*, as has standardly been claimed.[1] I end by putting the theoretical apparatus to work in analysing some real-world cases of framing.

1. Attribute Framing

My focus throughout this discussion will be on instances of 'attribute framing', in which two sentences of natural language have logically equivalent compositional semantic contents (determined by the conventional lexical meanings of their constituent words and their manner of combination, in accordance with grammatical rules); yet they generate systematically different responses in judgement tasks, even while the wider context is held constant.[2] More specifically, attribute frames are pairs of sentences that ascribe the same property to a subject by using one or other of two contradictory predicate expressions. For example, a speaker might describe a basketball player by using sentence (1) or sentence (2):

(1) The player made 60% of his shots

(2) The player missed 40% of his shots

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[1] Throughout the discussion, I will refer to the *producer* of language as the 'speaker', whether it is presented in spoken, written, or signed form, and I will refer to the *recipient* as the 'hearer' or 'audience'.
[2] The terminology of 'attribute framing' comes from Levin, Schneider, & Gaeth (1998). For current purposes, I leave aside *risky choice* framing, as originally investigated by Tversky and Kahneman (1981). I believe the arguments I put forward apply *mutatis mutandis* to those more complicated paradigms but this is not something I will attempt to show here.

The expressions 'missed…his shots' and 'made…his shots' are *contradictory*; since no shot can be both missed and made, they are *mutually exclusive* and, since any shot is either missed or made, they are *jointly exhaustive*.

The sentences seem to be logically equivalent at the level of their compositional semantic meaning; making 60% of shots logically entails missing 40%.[3] Despite this, a basketball player is typically judged more valuable to a team when his performance is described using (1) rather than (2) (Leong, McKenzie, Sher, & Müller-Trede, 2017).

More generally, myriad studies show that when speakers use positively-valenced expressions, audiences typically evaluate the target more favourably than if negatively-valenced counterparts are used (for a meta-analysis, see (Levin et al., 1998)). These shifting judgements are known as 'attribute framing effects' (Levin et al., 1998).

On the face of it, attribute framing effects present a puzzle: why do people arrive at different judgements on the basis of sentences with logically equivalent compositional semantics? The psychological literature contains several competing explanations. For the purposes of this paper, I will be assuming that attribute framing effects are explained, at least in part, by the 'reference point hypothesis' developed by Craig McKenzie, Shlomi Sher and others (Leong et al., 2017; McKenzie, 2004; McKenzie & Nelson, 2003; Sher & McKenzie, 2006, 2008, 2011).[4]

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[3] In fact, logical equivalence fails if number expressions are held to be semantically lower-bounded, such that '60%' means 'at least 60%' and '40%' means 'at least 40%' (this is explored experimentally by Mandel (2014)). I argue elsewhere that this may contribute to framing effects but cannot explain them in full. For now, I leave this issue to one side.

[4] The reference point hypothesis forms part of their wider 'information leakage account' (Sher & McKenzie, 2006, 2008). However, I focus on the narrower hypothesis because is more theoretically developed, explanatorily powerful, and empirically well-supported than other aspects of the account. In my PhD thesis, I argue for this more fully, showing that it explains a broad sweep of framing data better than various rival accounts. I do not recount the arguments here, however, since I want to focus on other implications of the approach that arise further down the line.

2. The Reference Point Hypothesis

I characterise the reference point hypothesis as follows:

> **Reference Point Hypothesis:** By explicitly using one or other of two contradictory predicate expressions, alternative frames convey that the subject of predication is abundant in the corresponding attribute, relative to the most contextually salient alternative state of affairs.[5]

The reference point hypothesis is supported by several empirical studies (Honda & Yamagishi, 2017; Ingram, Hand, & Moxey, 2014; Leong et al., 2017; McKenzie & Nelson, 2003; Sher & McKenzie, 2006; Teigen & Karevold, 2005). These demonstrate both that speakers tend to find one or other of a pair of alternative frames more appropriate to use, according to which attribute is abundant relative to the reference point; and, correspondingly, that hearers infer information about the reference point from the speaker's choice of predicate expression

To see how the hypothesis is supposed to work, consider again sentences (1) and (2). The use of 'made' in (1) indicates that 60% represents a *relatively large* proportion of shots made (equivalently, 40% represents a relatively small proportion of shots missed). Conversely, the use of 'missed' in (2) indicates that 40% represents a relatively large proportion of shots *missed* (equivalently, 60% represents a relatively small proportion of shots made). In Leong et al.'s study, the contextually salient alternative is a 'typical' player. Thus, the first frame makes the target player seem *relatively good*, performing better than do typical players. Conversely, the

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[5] This is a slight refinement of the characterisation provided by the proponents:

> McKenzie and Nelson (2003) hypothesized the following regularity in linguistic behavior: (1) In describing a fixed state of proportionate affairs, speakers are more likely to describe the proportion in terms of "X1" when X1 has increased relative to the reference point proportion (the norm, or what one would have expected) than when X1 has decreased relative to the reference point. (2) Listeners are sensitive to this regularity—that is, listeners are capable of correctly inferring the reference point proportion from the speaker's choice of proportion-frame. (Sher & McKenzie, 2006, p. 471)

second frame makes him seem *relatively bad*, performing worse than the typical player. Importantly, then, while both frames convey the same information about the *target* player, they shift our assumptions about the reference point (here, the *typical* player) in a way that makes the target player's performance seems better or worse by comparison.

3. Pragmatic Content

As indicated above, I do not believe the reference point information conveyed by sentences (1) and (2) is part of their compositional semantic (or 'logical') meaning. We can tell this much from the fact that the information is defeasible (or 'cancellable' (Grice, 1975)). For example, sentence (3) explicitly cancels any implication that the player missed a relatively large proportion of his shots, and yet it remains perfectly coherent.

(3) The player missed 40% of his shots but that was less than average.

In contrast, a sentence's compositional semantic content is not defeasible, as shown by the following unsuccessful attempt to cancel the information that the player *missed* 40% of his shots:

(4) #The player missed 40% of his shots but he didn't miss them.[6]

Here, the last clause directly contradicts the first.

It is also possible to construct contexts in which the reference point information is *implicitly* cancelled, as in the following discourse:

(5) *Miles:* Can you tell me the proportion of shots the player *missed*, so I can enter the figures correctly into this spreadsheet?

Miya: The player missed 40% of his shots.

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[6] I use the hash symbol to indicate that the sentence is unacceptable.

Here, Miya's utterance cannot be taken to imply any additional reference point information since her linguistic choice is 'forced' by Miles's request. In contrast, no context can be set up which would implicitly cancel a sentence's compositional semantic content (while still being meaningful).

Despite the defeasibility of reference point information, the evidence suggests that it is conveyed systematically and reliably across a wide range of contexts (see, in particular, (Sher & McKenzie, 2006)). Since it seems to be implied *unless* explicitly or implicitly cancelled, we can surmise that frames convey reference point information 'by default'.[7]

The proponents of the reference point hypothesis claim that reference point information is communicated 'pragmatically' (Sher & McKenzie, 2008). They do not unpack exactly what they mean by this.[8] However, I will assume that the association between explicit predication and relative abundance is the result of a linguistic convention, norm, or regularity in use.[9] In particular, the standard way to describe a state of affairs believed to be relatively abundant in a property is with a frame that explicitly uses the predicate corresponding to that property. The

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[7] I argue for this more fully in the wider PhD thesis, where I link the idea to Levinson's notion of a 'default interpretation' (Levinson, 2000).

[8] Indeed, they seem to remain deliberately neutral between possible pragmatic mechanisms:

> Note that the present analysis makes no assumptions about the existence of Gricean norms, or, more generally, about the communication of informative intent...The analysis simply points out that, when a certain kind of regularity in speaking behavior exists, a particular kind of inference will typically be warranted, norms and intentions aside. Whether and how listeners, in drawing such inferences, consider informative intentions or conversational norms is a question for further research to address. (Sher & McKenzie, 2006, p. 470, fn3).

Elsewhere I consider, and reject, other ways in which reference point information could be 'pragmatic'. In particular, I show there that it is not conversationally implicated, in the traditional Gricean sense of always being calculable on the basis of general rational principles of conversation (Grice, 1975). Holleman and Pander Maat (2009) draw a similar conclusion, although they use this to argue against the reference point hypothesis.

[9] Note that conventions of *use* are distinct from the lexical and syntactic conventions which determine sentences' compositional semantic contents.

idea, then, is that that speakers and hearers deploy their (presumably tacit) knowledge of the relevant convention in exhibiting sensitivity to the use of alternative frames.[10]

I note at this point important parallels between the proposals I have presented and the framework developed by Bolinger (2017) to account for the offensiveness of 'slurring' terms. According to her 'contrastive choice' account of slurs, a speaker's choice of a (slurring) expression rather than a (neutral) counterpart, 'signals' that the speaker believes certain information associated with the selected expression.[11] Put more formally:

> For some content φ, when it is common knowledge in the linguistic community that
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> (i) α is an expression for ψ associated with φ, and
>
> (ii) β is an expression for ψ not associated with φ
>
> then in situations where the choice of expression is not forced, and the speaker is aware of (i) and (ii), selecting α in contrast to β signals that the speaker endorses or shares φ.
> (Bolinger, 2017, p. 447)

Although Bolinger is targeting a different linguistic phenomenon, the theoretical constructs of a signalling convention and contrastive choice read across nicely to the case of framing; the common idea is that a speaker's choice to use one expression, rather than an available alternative, signals that the speaker believes the content with which that expression is normally or conventionally associated. In the case of framing, this associated content is the reference

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[10] Some will find the appeal to a convention unsatisfying in the absence of any account of why we might have ended up with it. I cannot hope to address that large question here but I would like to indicate two avenues via which an explanation might be attempted. First, one might develop a social-historical account of the emergence of the convention within particular language communities, in a similar way as for any other linguistic convention (Lewis, 1969). Alternatively, one might hypothesise that the convention emerges from a deeper, universal fact about human cognition and communication, and look instead to psychological accounts. Further cross-linguistic research would be helpful in determining which route holds more promise.

[11] The notion of 'signaling' here is drawn from (Terkourafi, 2005a, 2005b, 2005c).

point information. I continue to draw on Bolinger's conceptual apparatus in the ensuing discussion of epistemic rationality, adapting it to my own purposes of analysing framing phenomena.

4. Rationality and Fault

In the framing literature, it is standardly claimed that hearers' shifting judgements, in response to speakers' framing choices, provide evidence of hearers' *irrationality* (Kahneman, 2011; Shafir & LeBoeuf, 2002; Stanovich & West, 2000; Tversky & Kahneman, 1981). Specifically, hearers are taken to be violating the condition of *description invariance*, which states that equivalent descriptions should lead to identical judgements. In contrast, Sher and McKenzie argue that the informational inequivalence of frames at the pragmatic level undercuts this claim (at least with respect to *attribute* framing). They write:

> Whenever considerations of relative state matter (and they usually do), a population of rational agents, cognizant of the impact of reference points on frame selection, would exhibit a valence-consistent shift. (Sher & McKenzie, 2006, p. 482)

This bold and provocative proposal merits closer attention. Although I will end up broadly endorsing the idea that a hearer's sensitivity to alternative frames can be rational, I hope to show that the issues are subtler and more complex than they may appear at first sight.

4.1. Beliefs and Trustworthiness

Recall that we are assuming typical utterance of sentence (2), above, to convey the following reference point information as a matter of linguistic convention:

(6) 40% represents a large proportion of shots missed (or, equivalently, 60% represents a small proportion of shots made) relative to the most contextually salient alternative (the 'reference point').

I will now consider whether, and when, it is rational for a hearer to infer: (i) that the speaker *believes* (6); (ii) that (6) is *true*; and (iii) that, given the truth of (6), the target player's performance should be evaluated *relatively unfavourably*. I focus on 'epistemic rationality', which I understand to concern what one is justified in believing and, where applicable, communicating to others.

Starting with point (i), the hearer of (2) has a *pro tanto* reason to infer that the speaker believes (6), on the basis of the assumption that the speaker is using language in the ordinary way.[12] Note that this *pro tanto* reason does not yet justify the hearer's evaluating the player relatively unfavourably, all things considered. First, there may be countervailing or neutralising evidence concerning the speaker's belief, as in the earlier examples of (explicit or implicit) cancellation. In such cases, there is a suspension of the linguistic convention associating explicit predication with relative abundance. Thus, the hearer would seem to attract some epistemic fault if she still inferred that the speaker believes (6).

Second, even if the speaker fails to cancel the reference point information, she may not actually believe it if she is deliberately attempting to *mislead* the audience, violating the communicative norm of conveying only what is believed to be true. If the hearer has reason to suspect that the speaker is being uncooperative in this sense, that ought to block the inference that the speaker believes (6). Again, to the extent that the inference still goes through, the hearer would seem to behave irrationally, and incur fault.

Nevertheless, note that the speaker would also bear epistemic fault in this case, on the basis of being an untrustworthy provider of testimony. Moreover, even if hearers are epistemically

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[12] Strictly speaking, perhaps the hearer ought to assign only some partial degree of credence to this inference, reflecting the fact that the association between explicit predication and relative abundance is unlikely to perfect. Although this seems plausible, for simplicity I will talk as though the hearer infers the information absolutely. I don't believe anything in my argument hangs on this decision.

reckless in ways that contribute to their being misled, this does not in any way mitigate the speaker's responsibility for attempting to mislead. In other words, it is not as though there is a finite quantity of epistemic fault to share around; the fault attributed to hearer and speaker are independent of one another.[13]

Of course, a speaker might attempt to deny responsibility for misleading the audience, by claiming only to have intended to communicate the compositional semantic content of the frame, not the additional pragmatic content. I suggest that this will be an adequate defence only where it is plausible that the speaker was *genuinely* insensitive to the pragmatic effects of her linguistic choices; and where such ignorance is *acceptable* given the circumstances (which will depend *inter alia* on contextual features such as her position, status, and role in society, along with the stakes associated with being misinterpreted). In many cases (including, I think, the real-world examples discussed below) these conditions do not hold and the speaker remains at fault. Moreover, I suggest that in many ordinary contexts, hearers are justified in assuming speakers to be sincere, unless there are clear reasons to suppose otherwise.[14]

4.2. Truth and Reliability

Even if a speaker of (2) sincerely believes (6), there may be reasons to think that (6) is nevertheless unlikely, in fact, to be true (bringing us to point (ii) above). If the hearer has reasons to suspect that the speaker is an unreliable provider of testimony in this sense, it would be epistemically irresponsible to infer (6). As before, though, the speaker is also at fault, to the extent that the failure of her beliefs to track the truth is down to poor epistemic practice on her

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[13] This is inspired by Saul's point that "being partly causally responsible for a wrong done to one does nothing to alter the nature of that wrong" (Saul, 2012, p83). To show this, she provides the example of a 'reckless' victim, who is mugged upon entering a part of town he knows to be dangerous. Even though the reckless victim may be considered partly causally responsible for being mugged, this does not take away from the wrong done by the perpetrator, which is equally as bad as mugging a 'careful' victim in a generally safe part of town.

[14] Simion and Kelp (2018) similarly argue that hearers generally have a default entitlement to assume speakers to be sincere, given the norms governing linguistic assertions.

part. For example, if a speaker of (2) believed falsely that basketball players typically miss less than 40% of their shots, purely on the basis of watching footage of Earvin "Magic" Johnson Jr., she would be culpably unreliable.

So far, I have been assuming that the context determines a uniquely salient reference point (such as the *typical* basketball player in our example case). However, I want now to note some problems that arise where the identify of the reference point is indeterminate. In such cases, the reliability of the pragmatic information conveyed immediately becomes very difficult to assess: relative to *what* is the attribute to be considered abundant? And, is that reference point actually *relevant* to the speaker's communicative goal? The indeterminacy here points to further violations on the part of the speaker, this time of the communicative norms of clarity and relevance (Grice, 1975). After all, it is trivially true that a property can be considered to be in abundance relative to *some* alternative; but the speaker must be communicating something more specific than this if she is to be understood as a cooperative interlocutor. To the extent that the identity of the reference point is not clear, or not clearly relevant, the speaker falls short as a communicator; by expanding the opportunities for misinterpretation, she attracts some epistemic fault as a provider of testimony. In turn, of course, the hearer may also bear some epistemic responsibility for attempting to identify a relevant reference point before accepting reference point information. In section 6 we will see some real-world examples of this.

4.3. Value and Relativity

Finally, we come to the question of whether a player's *relative* performance should affect the evaluation of his performance *per se*. It may be tempting to think that the evaluation should relate only to his *absolute* performance. That would make shifts in evaluative judgements irrational, even if they tracked real differences in reference points. However, I think we should resist this temptation. As the earlier quote from Sher and McKenzie suggests, attaching value to a target will often be very difficult, or fairly arbitrary, independently of contextualising

information that provides a standard, or yardstick. Thus, knowing that a player performs relatively highly, say, does, I think, provide choice-relevant information. All other things being equal, it provides a reason to favour that player over one whose performance is relatively poor.[15]

The conclusion of this theoretical part of the discussion is that, in many cases, it will be epistemically rational for a hearer to infer from a speaker's use of frame that the speaker believes – and believes *truly* – the associated reference point information. There is every reason to think this is pertinent to evaluating the subject of predication. There are also cases where clear countervailing evidence renders such inferences epistemically irrational. However, it is interesting to notice that, in such cases, the speaker typically bears epistemic responsibility as well. I turn now to consider how these theoretical points play out in practice.

5. Experimental Settings

In classic framing studies, the experimenters (or the protagonists in their vignettes) cannot, in fact, be said to *believe* the pragmatically-conveyed reference point information of their frames, rather than merely the compositional semantic content. So, what goes wrong here?

A first point to note is that, fairly obviously, the reference point information is not *explicitly* cancelled by the experimenters. Nevertheless, one might think that something about the experimental context *implicitly* cancels it. If this were correct, a sufficiently sophisticated participant ought not infer any pragmatic information from the fact that one frame is used rather than another.

I am not persuaded, though, that there is, in fact, successful cancellation. In particular, the experimenter's use of a particular frame does not seem to be *forced*, as in the earlier example

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[15] Of course, this depends on their being compared against the *same* yardstick. However, in the absence of wider contextual differences that would make distinct standards salient, the hearer has no reason to think otherwise.

of Miles and Miya, but remains *freely* chosen. Moreover, participants are required to make evaluative judgements in these contexts on the basis of very scant information; for example, in the study by Leong et al. (2017) they must evaluate a basketball player without being given any contextualising information about how his performance compares against other players'. The speaker's choice of frame may be the only useful source of such information, making it even more reasonable for participants to rely on the reference point information that choice would ordinarily convey.[16]

I think it is plausible that the experimenters are in some sense *misleading* participants by implying the reference point information without actually believing it themselves. Again, one might object that participants should expect the experimenters to be less than cooperative, and should therefore be on their guard against attempts to mislead, given that experimental contexts are atypical communicative settings in many respects. On the flipside, though, I suggest that participants have at least equally strong motivations for *trusting* the experimenters (particularly once we appreciate the relations of power and authority in these contexts). In any case, even if the participants insufficiently unwary, and thus exhibit a kind of epistemic recklessness, we saw above that this in no way absolves the experimenters from epistemic fault, as untrustworthy communicators.

The analysis presented here has important implications: assuming that, in ordinary contexts, hearers are better able to rely on the trustworthiness of speakers, or, at least, are better able to spot when they are untrustworthy, they might be less susceptible to being 'mis-framed' outside

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[16] Having said this, it seems possible that framing tasks might be presented in ways that *do* successfully cancel reference point information. This would be one way to understand what's going on when Bless, Betsch, and Franzen (1998) find that labelling a task as 'statistical' (rather than 'medical') eliminates framing effects. In effect, the statistical focus might limit participants to drawing inferences only from the compositional semantic meanings of frames, setting aside the wider pragmatic information they are standardly used to convey.

the lab. Therefore, the epistemic fault that lies with the experimenters here has the potential to jeopardize the real-world applicability of their findings.

6. Public Discourse

Framing is ubiquitous in public discourse, including in advertising, media, and political speech. Its instances form a heterogeneous set, demanding distinct and tailored analyses. Although I cannot do justice to these here, I will work through a couple of examples to indicate how we might proceed.

The first example comes from the UK's (pro-Brexit) Minister for International Trade, Liam Fox. In a speech at Bloomberg in February 2018, in which he outlined the Britain's trading future post-Brexit, he said:

(7) I often repeat the fact that the IMF estimates that, in the next 10 to 15 years, 90% of global economic growth will originate from outside the EU.[17]

In accordance with the reference point hypothesis, I take this to convey (8):

(8) 90% is a large proportion of global economic growth to originate from outside the EU, relative to the most contextually salient alternative (the 'reference point').

The second example comes from headlines in several British newspapers in August 2017, stating variations on (9) (which is taken from The Telegraph)[18]:

(9) One in five unemployed people in the UK are migrants, official figures reveal for the first time.

This frame generates the following reference point information:

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[17] The full speech is available at the following link: https://www.gov.uk/government/speeches/britains-trading-future
[18] The full article is available at the following link: https://www.telegraph.co.uk/news/2017/08/16/one-five-unemployed-people-uk-migrantsofficial-figures-reveal/

(10)   One in five is a large proportion of the UK's unemployed people to be migrants, relative to the most contextually salient alternative (the 'reference point').

In neither example does the reference point information seem to be cancelled, either explicitly or implicitly. It is difficult to tell whether the speakers sincerely believe the information; if not, their statements would be misleading in a similar way as was described in the previous section. However, let us give them the benefit of the doubt and assume that they are trustworthy in this sense. Nevertheless, the reference point information in (8) and (10) is not obviously, or straightforwardly, true; the truth of (8) and (9) will depend in part on precisely what the reference point is supposed to be. A large part of the problem with these cases of framing, then, is that there is no uniquely contextually-salient reference point, and nor is one explicitly stated in the surrounding discourse.

Take for example the reference point information in (8). Since over 90% of the world's population resides outside the EU, it might well be expected that at least 90% of global economic growth will originate there. The proportion of 90% therefore doesn't count as large relative to a situation in which growth corresponds roughly with population size. Perhaps, then, Fox is simply *mistaken* about this, believing falsely that the economic growth of countries outside the EU is disproportionately large, compared to their population size. In that scenario he would turn out to be an unreliable provider of testimony about global economic growth patterns. Given his brief and position, that would appear to be a fairly significant epistemic fault. Conversely, hearers arguably incur little fault for expecting Fox to be more reliable on such matters.

Perhaps, though, 90% genuinely *is* a 'large' proportion, in *some* relevant respect. For example, Fox may be correcting a widespread misconception that the EU would be growing faster than other parts of the world in the next 10 to 15 years. Or, perhaps it has been growing faster in the

recent past, and he means to signal a change in fortunes. Nevertheless, Fox does not make the reference point *clear*, and his failure to do so also casts doubt on the *relevance* of his utterance of (7); since it is not clear in what respect 90% counts as a relatively large proportion, it is equally difficult to see how it might affect the case Fox makes for prioritising trade with non-EU countries. As discussed above, then, Fox violates the communicative norms of clarity and relevance, making himself liable to misinterpretation. To that extent, at least, he would seem to incur some epistemic fault. Given his platform, and the stakes involved, even if the communicative failings are claimed to be unintentional, they remain problematic.

Arguably, though, hearers too bear some responsibility for misinterpretation in such cases. Presumably, they should be especially wary where a speaker is known to be coming from a particular angle, and to be in the business of persuasion. This is perhaps even more apparent in the case of (9) where the newspapers in question have a well-known anti-immigrant stance. Before accepting that there are relatively many unemployed migrants (an inference which is likely to play into, and reinforce, prevalent anti-immigrant narratives), the audience would be well-advised to question what the reference point is supposed to be in this case and what conclusions follows from that. Instead, I suspect that they typically assume simply that there must be *some* relevant reference point, without considering in any great depth or detail what it could be. Alternatively, perhaps the reference point is taken to be whichever one would allow (10) to be assimilated least effortfully with their pre-existing beliefs. Clearly, then, hearers may also bear responsibility for inferring reference point information on these kinds of occasions. Again, though, this does not absolve the speaker from fault. Thus, the analysis suggests, at least, a two-pronged approach – aimed both at speakers and hearers – for rectifying the epistemic wrongs associated with framing.

Conclusion

Framing effects are often taken as evidence of flawed reasoning on the part of framed subjects. I believe Sher and McKenzie are right to challenge this view, given their pragmatic account, and I have tried to flesh out the reasons why. Although the picture I develop is complex and nuanced, it is possible to draw out some firm conclusions. First, audiences will often be epistemically rational in making pragmatic inferences on the basis of frames, as long as there is no reason to suppose that the reference point information has been cancelled, or that the speaker is untrustworthy or unreliable. Second, even where a hearer is epistemically reckless, it is worth noticing that the speaker typically also bears some epistemic fault in such cases, for failing to fulfil the responsibilities of a provider of testimony. Third, it is important to keep in mind that the fault attributed to the hearer in no way detracts from that attributed to the speaker. These conclusions are sufficient to block the standard, univocal charge of irrationality that is common in the literature; and it invites us to conduct closer analyses of concrete instances of framing, along the lines suggested in the final sections of the paper.

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